

6p 1655



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December 3, 1999

Assistant Commissioner for Patents  
Washington, D.C. 20231

CERTIFICATE OF MAILING	
37 C.F.R. §1.8	
I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C., 20231, on the date below:	
<u>December 3, 1999</u> Date	 Gloria L. Norberg

Re: U.S. Patent Application SN 09/027,439 entitled "Compositions and Methods for Differentiating Among *Shigella* Species and *Shigella* from *E. coli* Species" – Portugal, *et al.* (based on 60/038,117); Our Ref.: 044198.0000; UM Ref. No.: LS-97-046

Sir:

Enclosed for filing are the following:

1. Request For Extension of Time; Amendment; and Response to Written Restriction Requirement mailed October 4, 1999;
2. Our firm check in the amount of \$55.00 to cover the fee for a one-month Extension of Time; and
3. Return postcard to acknowledge receipt of these materials. Please date stamp and mail this postcard.

Should the check be insufficient or omitted, or should an overpayment be included, the Assistant Commissioner is authorized to deduct or credit said fees from or to Akin, Gump, Strauss Hauer & Feld, L.L.P. Deposit Account No. 01-0660.

Respectfully submitted,

Gloria L. Norberg  
Reg. No. 36,706

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Agent for Applicants

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GLN:pj  
Enclosures



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:  
Frank H. Portugal, *et al.*

Serial No.: 09/027,439

Filed: February 20, 1998

For: Compositions and Methods for  
Differentiating Among *Shigella*-  
Species and *Shigella* from *E. Coli*  
Species

Assistant Commissioner for Patents  
Washington, D.C. 20231

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Examiner: J. Souaya

Group Art Unit: 1655

Attorney Docket No.: 044198.0000

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December 3, 1999	<i>Gloria L. Norberg</i>
Date	Gloria L. Norberg

**REQUEST FOR EXTENSION OF TIME;  
AMENDMENT; AND RESPONSE TO WRITTEN  
RESTRICTION REQUIREMENT MAILED OCTOBER 4, 1999**

Sir:

The present paper is submitted as a complete response to the Official Action mailed October 4, 1999. The present paper is timely filed, as the present paper is also a request for an extension of time of one month to and including December 4, 1999. Should any further extension of time be required, this document is such a request. Enclosed is a check in the amount of \$55.00 for the fee for a one-month extension of time. Should any further fees be due with the filing of the present document, or should an overpayment be included therein, the Assistant Commissioner is authorized to deduct or credit said fees from Akin, Gump, Strauss, Hauer & Feld, L.L.P. Deposit Account No. 01-0660.

**AMENDMENT**

**In the Claims:**

Please amend Claims 1-13, and 17 as follows.

1. (Amended) A purified nucleic acid molecule of 10 to 40 nucleotides, the molecule comprising an [An] identifying nucleotide or identifying combination of nucleotides of 16s ribosomal RNA or 16s ribosomal DNA as set forth in Table 2 present in a *Shigella* species and not present in *E. coli*, or a nucleic acid molecule complementary to said molecule.

2. (Amended) A purified nucleic acid molecule of 10 to 40 nucleotides, the molecule comprising an [An] identifying nucleotide or identifying combination of nucleotides of 16s ribosomal RNA or 16s ribosomal DNA as set forth in Table 2 present in *E. coli* and not present in a *Shigella* species, or a nucleic acid molecule complementary to said molecule.

3. (Amended) A purified nucleic acid molecule of 10 to 40 nucleotides, the molecule comprising an [An] identifying nucleotide or identifying combination of nucleotides of 16s ribosomal RNA or 16s ribosomal DNA as set forth in Table 2 present in one species selected from the group consisting of *Shigella sonnei*, *Shigella flexneri*, *Shigella boydii*, and *Shigella dysenteriae*, and not present in the other species of *Shigella* and not present in *E. coli*, or a nucleic acid molecule complementary to said molecule.

4. (Amended) The molecule of Claim 1 or 3 wherein the nucleotide or combination of nucleotides is [of Claim 1 or 3] present in *Shigella sonnei*.

5. (Amended) The molecule [nucleotide or combination of nucleotides] of Claim 4 wherein the identifying nucleotide is a C at position 964 or a deletion at position 978.

6. (Amended) The molecule of Claim 1 or 3 wherein the nucleotide or combination of nucleotides is [of Claim 1 or 3] present in *Shigella dysenteriae*.

7. (Amended) The molecule [nucleotide or combination of nucleotides] of Claim 6 wherein the identifying nucleotide is an A at position 76.

8. (Amended) The molecule of Claim 1 or 3 wherein the nucleotide or combination of nucleotides is [of Claim 1 or 3] present in *Shigella boydii*.

9. (Amended) The molecule [nucleotide or combination of nucleotides] of Claim 8 wherein the identifying nucleotide is a C at position 92.

10. (Amended) The molecule [nucleotide or combination of nucleotides] of Claim 2 wherein the identifying nucleotide is a T at position 88p.

11. (Amended) A purified nucleic acid molecule of 10 to 40 nucleotides, the molecule capable of hybridizing to a 16s rRNA region or a 16s rDNA region having a genus-specific nucleotide of *Shigella* and not to an equivalent 16s rRNA region or 16s rDNA region of *E. coli*, or a nucleic acid molecule complementary to said molecule, the molecule thereby capable of distinguishing *Shigella* from *E. coli*.

12. (Amended) A purified nucleic acid molecule of 10 to 40 nucleotides, the molecule capable of hybridizing to a 16s rRNA region or a 16s rDNA region having a genus-specific nucleotide of *E. coli* and not to an equivalent 16s rRNA region or 16s rDNA region of a *Shigella* species, or a nucleic acid molecule complementary to said molecule, the molecule thereby capable of distinguishing *E. coli* from *Shigella* species.

13. (Amended) A purified nucleic acid molecule of 10 to 40 nucleotides, the molecule capable of hybridizing to a 16s rRNA region or a 16s rDNA region having a *Shigella sonnei*-, *Shigella flexneri*-, *Shigella boydii*-, or *Shigella dysenteriae*-specific nucleotide, and not to an equivalent 16s rRNA region or 16s rDNA region of the other *Shigella* species, or a nucleic acid molecule complementary to said molecule, the molecule thereby capable of distinguishing *Shigella* species.

Az 17. (Amended) A combination comprising a first and a second purified nucleic acid molecule [combination], each molecule having 10 to 40 nucleotides, the first capable of hybridizing to a first 16s rRNA region or 16s rDNA region as set forth in Table 2, the second capable of hybridizing to a second 16s rRNA region or 16s rDNA region as set forth in Table 2, the combination of molecules thereby capable of distinguishing *E. coli*, or a *Shigella* species, or a nucleic acid molecule combination complementary to said first and second molecules.

### **REMARKS**

#### **I. Restriction Requirement**

In response to the Restriction Requirement; Applicants elect, without traverse, the Invention of Group I.

Applicants reserve the right to file a divisional application on the nonelected invention.

#### **II. Inventorship**

The inventorship is correct for the election of the Group I invention.

#### **III. Status of the Claims**

Claims 1-13, and 17 have been amended. Claims 1-36 are pending. Claims 21-36 are non-elected.

Support for language of amended claims is found in the specification at page 16, lines 17-28 and in the claims as originally filed.

All matters having been addressed, reconsideration and an early indication of the allowability of Claims 1-20 is earnestly solicited.

Respectfully submitted,

*Gloria L. Norberg*

Gloria L. Norberg  
Reg. No. 36,706  
Agent for Applicants

Date: December 3, 1999

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